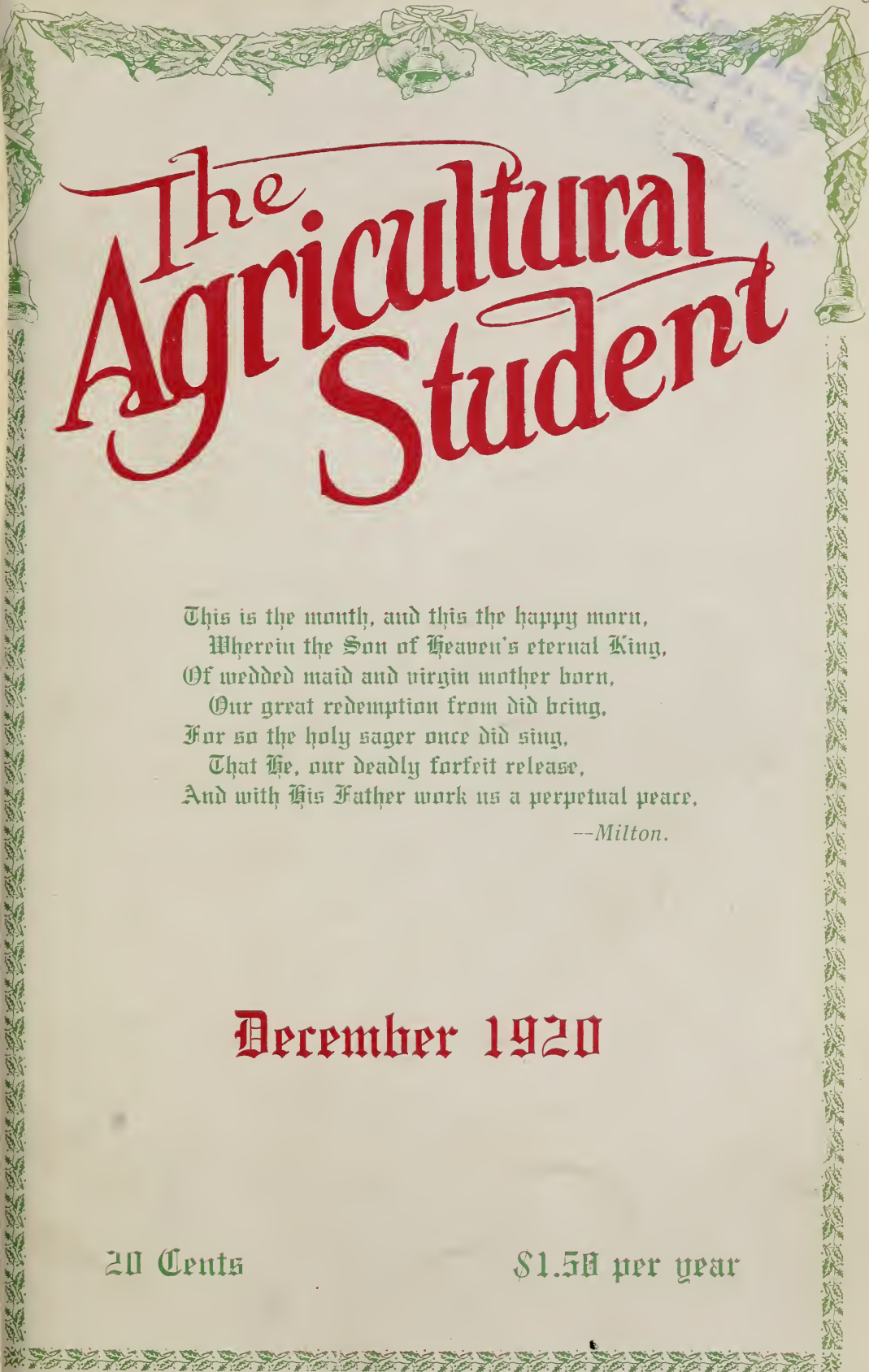


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# The Agricultural Student

This is the month, and this the happy morn,  
Wherein the Son of Heaven's eternal King,  
Of wedded maid and virgin mother born,  
Our great redemption from did bring,  
For so the holy sager once did sing,  
That He, our deadly forfeit release,  
And with His Father work us a perpetual peace,

—Milton.

December 1920

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from  
the  
Checkerboard  
Bag*



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MANUFACTURERS OF

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A. J. Copeland

F. W. Ines

A. L. Baker

L. B. Mennell

Clara F. Haskins



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**IS YOU R NEIGHBOR?**

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Son*

*Mother  
Daughter*

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in Columbus, than an**

# **Ohio State University CALENDAR**

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# The Agricultural Student

VOL. XXVII

OHIO STATE UNIVERSITY, COLUMBUS, OHIO, DECEMBER, 1920

No. 4

## THE FARM BUILDING SITUATION

By F. W. Ives, Professor of Agricultural Engineering, Ohio State University.

"**S**HALL I build now or wait for a drop in prices?" is a question frequently asked. It is very difficult to answer, or at least in a reassuring way.

The prices of some commodities are dropping at present but others show a tendency to rise. Lumber has undergone two price cuts during the past 90 days but, with the raise in freight rates, is not likely to drop further at the present time. To counterbalance the drop in lumber prices, cement has taken an upward turn and is not likely to drop in price until the coal situation improves, coal being one of the largest factors in the cost of production of cement.

It is quite likely that wages will be very slow to drop, if at all. Since labor is one of the largest items in the production of building materials and the shaping of these materials into a building, no great reduction in the cost of building can be hoped for very soon.

Another factor that should continue to hold materials and wages fairly stable is the shortage of housing facilities in our larger towns and cities. High rents are sure to result in more building as soon as there seems to be any relief from the cost of construction. The curtailment of production in automobiles, tires and accessories and certain non-essentials will cause capital to seek for more stable investments. This should make money somewhat easier for builders. Increased activity in building construction will act to stabi-

lize prices. Of course, there may be some hesitancy on the part of builders to build on a falling market for fear of losses or lowered rentals.

The discussion above deals with the general situation in Central Ohio and may vary with different sections. The whole situation may change before this article gets into print. The farm building situation is affected by the general conditions at any given time, but there are some factors affecting farm building that may have no influence on the construction of city dwellings or factories. These factors are the farm woodlot, the local sand or gravel bank, the local quarry, the local brick kiln or lime kiln and a lower cost of unskilled labor. (To this may be added a lower cost horse labor, a longer working day and cheaper living expenses).

Generally speaking, building operations should be carried out at a smaller unit cost on the farm than in town. A decline in building costs would probably be felt in town before it would on the farm. We may therefore assume that building costs, so far as they affect farm buildings, are not likely to change soon.

There are many reasons why we build. The chief reason is the natural depreciation of the building due to wind and weather. Fire is a larger factor than it should be. Increased production or changes in the type of farming make new buildings or additions necessary. Some build to out-



shine their neighbors. Whatever the cause, I have calculated that, based on census, fire marshals' reports, and county auditors' records, that each county in Ohio spends a normal annual average of \$200,000.00 for farm building construction, enlargement or repair. This may vary with locality.

If this vast sum of money was spent for buildings of the permanent type and using modern construction methods and based on carefully prepared plans, the annual building bill would soon be materially reduced and our buildings would be in such a condition that periods of high costs of building materials could be tided over without much difficulty.

If buildings are necessary, I should say that plans should be prepared now so that in early spring the materials may be contracted for and delivered. A considerable expense for time may be saved by having all materials at hand before construction begins. This is especially true for small or medium sized buildings of more or less standard construction. Native materials should be used when they are of a quality equal to those that may be imported or where they are well suited for the work.

It is not always good economy to stick to tradition in building a barn. In many cases, the square timber barn, even if build of timber from the home woodlot, may cost more than a modern type frame. On the other hand, guess work is fatal in the construction of the

plank and joist frame barns. These barns should be built only from carefully worked out plans and preferably from plans following the standards of the American Society of Agricultural Engineers. These standards have been carefully studied and further study is being made to effect economy and strength.

Whether or not one builds now depends upon a balance sheet made by himself. On one side of the balance sheet is the cost of the structure and the annual charge for interest, depreciation, taxes, and insurance. On the other side is the loss due to weather on stock, grain or other produce, machinery, and the extra time consumed in inconvenience, if the building is not built.

Prices of produce have dropped and are still dropping, so that now when building materials are also dropping a balance between a thousand feet of lumber and its purchase price in bushels of wheat are not greatly different than they were in the peak of prices.

Build if you must but build with care, more care than in the past. Study all conditions. Select a site with some study as to convenience and relation with other buildings in the farm group. Far too many buildings have been built because the place was handy to throw the lumber off the wagon. Enlist the services of your county agent. In short, it is my belief that the spring of 1921 will see a considerable revival of building especially in dwellings and farm buildings.

---

#### COMING IN AN EARLY ISSUE

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| Control of Egg Production by Artificial Light.....     | By Prof. G. S. Vickers |
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## ACCOMPLISHED BITS OF COMMUNITY WORK

By L. D. MENNELL, Director of Vocational Agriculture at Greenspring, Ohio.

**W**HAT is there to be done, or what must be done first? Perhaps this or a similar question has confronted every teacher of Vocational Agriculture not once, but many times. How far into the future is each one carried by his plans, How many times are the relative importance of each of the various demands for the attention of the instructor weighed and reweighed? The collection and arrangement of illustrative material, the attention to the standard of enrollment, the class room work itself, the supervision of projects and community work in its various phases. This latter problem is one which demands all the time one can give to it.

Among the details to be worked out perhaps the first and most highly important step is to establish a spirit of cooperation, sympathy and good-will among the farmers toward the department. A community which has a desire to back anything beneficial is surely a God-send to the instructor and is a priceless foundation for his later work. Such a goal should an instructor choose quickly.

The cooperation with the church, the Grange, the Farm Bureau and the County Agent are also valuable to each of us, and results can be quickly seen.

Then, why not visit the country school with the milk tester, making a variety in the routine of the school work and incidentally impressing boys with the idea that Opportunity is at hand? That strengthens the enrollment.

What an opportunity a community or club meeting is to mingle with the people, to exchange ideas or to increase the capital stock of the Department.

Parent-teachers' associations have proven themselves admirable chances for doing community work. What is more important and yet more grossly neglected than the education of the men and women of tomorrow? Parents at a recent meeting of this sort told the writer that prior to the founding of the local parent-teachers' association they had never been within the doors of the school building. Interest these and other parents by opening the Department, demonstrating the work or providing a few minutes' entertainment and another point is gained.

How often do fathers accompany their sons to any social function? Not many occasions will impress the boy with the fact that Dad has a right to some attention, more than a father-and-son banquet held in the Agriculture room. A new spirit of comradeship and mutual respect can quickly be engendered there.

One of the aims of the law that made this work possible was to fit the boy for life on the farm. If the boy can be made to feel that Dad's job is not such a bad one, a short cut to the goal has been discovered.

A home talent play staged by members of the Agricultural class with the help of the high school girls, seems to be a type of community gathering worthy of mention. Rural parents are fully as proud of their children's abilities as any parent living in the city, and it surely does them good to see a member of the family carry a part well.

Where the boy scout idea is prevalent and vocational agriculture teachers can find it possible to shoulder the responsibilities of scout master, a larger number of country boys are usually

found in the ranks. The boy scout group over which the writer is master has 16 of its 36 members hailing from the country. The popular conception of the purpose of the boy scout program is that it is for the benefit of the city or town boy. The country boy enjoys and appreciates the work as much if not more than his town neighbor.

Again, an exhibit of the work of the department might be put on at the Farmers' Institute. A section of the hall, turned over to the boys may be used for the display of work of the classes. Actual rations contrasting the new with the old methods of feeding; the corn tester with corn in various stages of germination, the milk tester showing the accuracy of the cream separator; surely show up valuable points and create additional interest. The farm level or other important apparatus may also be demonstrated for the good of the community.

The instructor must be or remain actively identified in the community in which he works and lives in order that in time of need, his aid will not be found wanting. There is not one of the phases of community work but what will call for the stuff of which the man is made.

Again comes the question, "What is to be done or what must be done first?"

### THE NATIONAL TRACTOR SHOW

Columbus will again have a National Show of great interest to the farming public. It has been decided by the National Tractor Show committee to hold the National Tractor Show at the Ohio State Fair Grounds, February 7-12, 1921. The three factors which helped the committee in deciding on the location of the show were, Columbus' adequate facilities in handling large crowds, the adaptability of Fair

Ground buildings to such an exposition and the general interest that has been shown in Ohio in power farming during the past two years.

This year's show will be vastly different from previous shows. Heretofore the National show has been an elaborate display of machinery with the idea of selling goods, paramount. The show this year will be strictly educational. The power farming idea has been sold to the majority of the farmers and it is the idea of the committee in charge to have the companies exhibiting goods to have a service booth in which is exhibited a tractor and its accessories. A competent service man will be in charge and will give instructions how to make adjustments so as to obtain the greatest efficiency from the tractor and its tools. One large enterprising company tried the idea out at its exhibit at the State Fair this year and found out it attracted more attention than any other feature of the exhibit, for this reason: A farmer who had been operating his tractor for some time is in a position to ask more intelligent questions relative to the efficient operation of his machine, than he would be before he had used his machine. Minor troubles were discussed and information given which would help the operator in his daily work with the machine.

Tractor accessories will have an important part in the general show scheme. Tools which can be used with a tractor economically are to be featured. The mere showing of these machines would not be very interesting to farmers, but the educational program which will be carried on at these different exhibits. To know how to properly adjust the knives of an ensilage cutter would not only mean a great saving of



power, but a much better grade of ensilage would be cut. The small thresher is now being sold in large numbers to farmers' threshing rings or for individual use. To belt a machine and run it at proper speed is one thing, but it is another thing to make it do good clean work. The proper adjustments to be made on the blast and sieves of the cleaning mill will be shown by one company manufacturing threshers.

In addition to the exhibits a very interesting program consisting of 26 numbers of subjects pertaining to the tractor and its accessories has been arranged. Men who are authorities have been asked to discuss subjects which they have spent a great deal of time and study. Following the daily program of five numbers there will be a round table discussion lead by a man who has had tractor experience in nearly every state in the Union and many foreign countries. It is needless to say that this round table discussion will be very interesting and many interesting facts gleaned from the discussion will enable tractor users to be more efficient users.

Another interesting part of the program will be a continuous moving picture show. Pictures of Power Farming in general will be shown. Special emphasis will be made to show pictures which will show the tractor doing work other than the conventional seed preparation.

Shows heretofore have been a mecca for concerns who would exhibit a tractor for the purpose of arousing general interest in order to sell stock to carry on the manufacture of their product. Many an honest dollar has been lost in stock selling schemes. It was ruled that unless the company was producing tractors or accessories in cer-

tain quantities they would not be permitted to show. This is indeed a great step forward as it will prevent a lot of stock selling before the goods have been proven and not found wanting. This has been a hindrance to the good development of the trade. Trucks will be exhibited too. This part of the show will be of interest, as many farmers are keenly interested in this angle of agriculture.

A visit to the show will repay one many fold for the time spent there. No admission fee will be charged as all the expenses of the show are taken care of by the sale of space to exhibitors. The show immediately follows Farmers' Week, plan to see them both and make special effort to attend.

---

### INVICTUS

*William Ernest Henley.*

Out of the night that covers me,  
Black as the pit from Pole to Pole,  
I thank whatever gods may be  
For my unconquerable soul.

In the fell clutch of circumstance  
I have not winced nor cried aloud,  
Under the bludgeonings of chance  
My head is bloody, but unbowed.

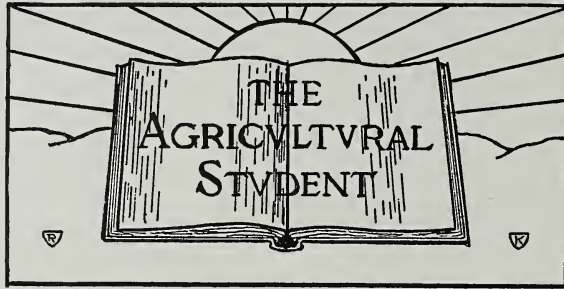
Beyond this place of wrath and tears  
Looms but the Horror of the shade,  
And yet the menace of the years  
Finds and shall find me unafraid.

It matters not how strait the gate,  
How charged the punishments the  
scroll,  
I am the master of my fate:  
I am the captain of my soul.

---

I count myself in nothing else so happy,  
As in a soul rememb'ring my good  
friends.

—*Shakespeare in Richard II.*



OF  
OHIO STATE UNIVERSITY  
A Medium for Exchange of Ideas Between College and Farm

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## EDITORIALS

### AG. OPEN NIGHT

On October 29th the agricultural students held their annual mixer. About seven hundred were there, tho probably only about five hundred of these were Ag. students. At present there are enrolled in the College of Agriculture about 1100. Where were the other six hundred? What is the purpose of this Ag. Open Nite?

An important phase in the education of the present day student farmer is the appreciation of the spirit of cooperation. It is an acknowledged essential under existing rural condition. This mixer idea fosters the spirit of cooperation. What the man or woman is trained to do here he or she will do later. Even in college activities on the broader scale, there is absolute need of cooperation. The recent student election illustrates this point. There should be a stronger bond of fellowship between men of the Agricultural College. This is more important than in any other College, for we represent a class group, a rural body of men with common interests. Of course, a mixer like the Ag. Open Nite can only give added impetus to the cause. It is up to different groups and organizations as well as each individual to strengthen this feeling, thus making it a potent factor not only in his college life but in his life after graduation.

---

### TRUTH

City dailies today constitute another obstacle in the way of the farmer's progress. This, perhaps, is not intentional on the part of the publishers, but nevertheless they mold to a great extent the public's (and incidentally the consumer's) mind. Thus if incorrect statements are made relative to agricul-

tural conditions, the ultimate result will reach the farmer, affecting him probably adversely.

An example of this occurred recently in Columbus relative to the fixation of the price of milk to be paid the producer. Some petty politician who utterly disregarded the merits of the case made a "grand stand play" by making a statement that there was no reason for the price of foodstuffs to stay up, so he intended to have them go down. This was a good feature for the dailies who "feast" on unusual and frequently unreliable "morsels" of news. The result of the publicity of this was that the farmer was unjustly criticized and condemned as a profiteer. Statistics issued from Washington, D. C., prove that within the last four months food prices have taken a drop which is entirely out of proportion to the drop taken by other commodities, meaning that the farmer still must pay the price. To offset this, the truth must be advertised. This is possible when backed by some large organization that has the respect of the public. The Farm Bureau and the Grange are two such organizations. It therefore behooves us who "must pay" to boost these movements.

---

### HOMECOMING

December ushers in the gladdest day of the year, the day that marks the birth of our Savior. A feeling of reverence commingles with the feeling of joy that is in our hearts. The old folks look forward with additional pleasure, for it brings their sons and daughters home from school and the world.

This our home is warmed and lit  
And about the Yule-fire sit  
All the dear, all the known,  
Safe and here, still our own.

We will soon join them by the fireside where we as children underwent the thrill of early Christmas emotions. Today those emotions have a deeper, broader place in our lives. They prepare us for the future by strengthening us in Christian fellowship.

---

### POLICIES VS. POLITICS

With the election over and our faces turned firmly toward the future, we have some time to recall our thots previous to election. President Thompson's recent remarks relative to the low, moral plane on which a part of the campaign was carried brings to mind an editorial in our June issue from which we quote: "Did you ever notice in the study of History that remarkable characteristic of mankind in its ability in times of stress? Washington, Lincoln and Roosevelt are typical in America. Each of these men were the choice of the masses. Today another crisis is at hand. . . In one thing only we can feel assurance. That is, as of old, some latent law or instinct shall operate to guide the people in their subconscious tests of qualifications for the man of the hour."



# THE DAIRY

J. E. FREW, Editor; FLOYD D. FENTON, Assistant.

## PLANNING DAIRY CONGRESS

A gathering of the representatives of our dairy industry at the National Dairy Show effected the asking of Congress for authorization to hold an International Dairy Congress in the United States in 1922. For ten years preceding the European War, this Congress was held in Europe, but with the growth of dairying in this country, there will be increased possibilities if the Congress is secured.

## EXERCISE FOR THE COWS

Exercise for dairy cows is important even in winter and it pays to let them out in the barnyard about twice each day for periods depending upon the condition of the weather. Of course, during severe storms it is not necessary. When cows are fed heavily for milk production and yet given little chance to leave the stanchions there is a danger to their health.

The very best bred heifers will make poor cows if underfed and poorly cared for in early life.

A great many persons think only solid color Jerseys are purebred. This is a mistake. Many Jerseys on the Island of Jersey have "broken" colors.

Heifers should not freshen too young. They should be well along toward maturity before becoming cows. Heifers freshening at 25 to 28 months usually make better cows.

## BUSINESS STUDY OF

## DAIRY FARMING

The Ontario Department of Agriculture, through the Ontario Agricultural College, has been making several business surveys of the dairy farming business in the province of Ontario. The dairying district of Oxford County was studied for the year ending February 28, 1918, and a second study made for the year ending February 28, 1919, and the result of the second study under the title of Bulletin 275, has just been published.

A table of great interest to owners of cows is one showing the result of using a pure bred herd sire. Under this table, the animals from 300 different herds are grouped. No less than 131 of the herds are using and always have used, a grade sire. The Labor Income, by which is meant the receipts after the cost of producing including 5 percent interest on the investment, has been deducted, is \$961. The average price received for milk is \$94 per cow, and the cost of keeping is \$76, leaving a profit of just \$8 per cow.

In 49 herds a pure bred sire has been used for five years or less. The Labor Income jumped to \$1248 per farm; \$117 worth of milk was sold from each cow, and \$81 worth of feed was fed, showing that the caretaker was induced to give a little more attention to the animal. The profit on this class was \$36 per cow over the cost of feed.

In 46 herds a pure bred sire has been used for a period ranging from five to ten years. The Labor Income on this kind of farms was \$1473, and the milk

sold was \$115 per cow, or approximately the same as the other class; and the amount allowed for feed was exactly the same, \$81, leaving a profit of \$34 over the cost of feed.

In 74 herds a pure bred sire has been used over ten years. The Labor Income is now \$1710, and \$137 worth of milk was sold from each cow on the farm. The feed per cow cost \$6 and the profit was \$51.

The profit over feed from the highly graded herd is almost three times as great as that from the herd headed by the grade or scrub sire, while the Labor Income is almost twice as great. It is surprising that in such a specialized dairy district, no less than 131 for the farmers, or 43.6 percent, used grade sires during the year 1918. The same amount of labor and very nearly as much feed was required for these poor quality herds as for the graded-up herds, but the net profits were much lower. A farmer who depends upon his cows for more than half of his farm income has no place for the scrub sire.

There is an added result or benefit which was not taken into consideration by the compilers of the data, and that is that the surplus young stock would have more value if sired by pure bred bulls and from well graded-up dams.

The average size of farms in the surveyed district of Oxford County is 113 acres, and the average number of tillable acres per farm is 93.

Nineteen farmers made Labor Income of minutes \$512—or an average of less than 5 percent interest on their investment.

Among the conclusions reached by the compilers are: That the quality of live stock or the producing capacity of the milk cow, is the greatest single factor in determining profit or loss in the dairy farming business. The dairy cow

is the "commission house" through which the dairyman markets his produce. His profit depends upon how cheaply his produce is handled.

That the use of a grade or scrub sire cannot be tolerated by the progressive dairyman;

That the *average* man should not specialize in dairying to a greater degree than the receiving of 70 percent of his gross revenue from the dairy herd;

That rigid economy in operating expense is not the only key to success in dairy farming unless the quality of live stock be poor. Farming still pays a premium for hard manual labor, but the farmer with good stock may secure greater profit with less work by making a liberal expenditure for labor and feed;

That high milk yield per cow is the greatest single factor tending to reduce cost of production;

That breeding is a slower but much more profitable method of increasing milk yield per cow, and hence reducing cost of production than is feeding; in other words, it is not profitable to heavily feed poor cows, while a poor herd can be graded or bred up to a larger producing capacity.—*Holstein-Friesian World*.

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### Now for a Close-Up

"Have you hair nets?"

"Yes, ma'am."

"Invisible?"

"Yes, ma'am."

"Let me see one."

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### Where Did He Find Her?

The meanest man in the world has been discovered. He invited only married people to his wedding to escape future reciprocal giving of wedding presents.

## FARMING IN MONTANA

By A. J. COPELAND, Leader of Farm Management Demonstration, University of Montana.

**T**HIS state is a big one and the business of farming is carried on a great deal different from that in Ohio and the eastern states. The eastern and northern part of this state is prairie, while the western part contains the main chain of the Rocky Mountains and the Continental Divide is to be found just west of Helena. The valleys through the mountains are all farmed and prove themselves to be very productive.

Everything out here is either spoken of as dry land or irrigated land. When you stop to think and realize that the average annual rainfall for Montana is only  $6\frac{3}{4}$  inches in comparison to the average 39 inches for Ohio. During 1917, 1918 and 1919 there were districts in this state that received less than two inches of rain annually. In western part of state where the mountains and hills abound, one could not imagine why the hills and mountain sides, bare of vegetation of any kind were not all guttered up. You find them all nice and smooth, the answer being, no water. It is only natural that you would expect, on account of the difference in rainfall and climate, the practices of farming carried on here to be materially different from Ohio.

Another one of the things that struck me at first, was that you very seldom hear the word farm, everything is spoken of as ranch. The term ranch, being handed down from one generation to another as all the land, used to be used for grazing purposes and lots of it is yet. But with the increase in population and the increase in the price of land in the central and eastern

states has pushed many people to seek cheaper land in Montana, consequently the once grazing lands are fast being broken up and are becoming farming lands. The grazing is now being confined more or less to the rougher districts.

Farming is done on a much larger scale. The reason of larger farms is that the land is cheaper. A new settler comes in, he inevitably spends all his money for land and very few have capital left to equip their farms; pursuing the course of least resistance, they then enter into small grain farming, putting in just as large an acreage as possible and getting it in the ground in any old way and then trusting to God for a large harvest. The experience that most of our people have gained through the past three years of extreme drought, has taught many a lesson that grain farming alone does not pay. More and more are going into diversified farming each year.

The larger stock ranches are being broken up as homesteaders come in and take the free range away from them. Farming is probably carried on in this state on a larger scale than anywhere in the United States, there being one farm containing 260,000 acres of winter and spring wheat this year in one body and over 600 acres of flax in another body. One of the peculiar things about this farm, is that they do not own or use a single horse, everything being done by tractors. On account of the large scale of farming, more tractors will be found than are generally found in eastern states where the farms are usually smaller. This



farm owns its own threshing machinery as well as elevators at the railroad for handling the grain. This farm is handled on the unit basis, that is, there is a man for every so many acres who receives a certain stipulated salary together with a certain percentage of the crop grown. This system of keeping the men well satisfied seems to work out admirably.

The small grains, such as wheat, oats, rye and flax are more commonly grown. Some corn is grown for silage but more recently the sunflower has introduced itself in this state and has been received very favorably as a feed crop and especially being used for silage. The growing season is necessarily short for corn and in many places the altitude is too high. The advantages of sunflowers are, that they are more frost and drought resistant than corn, having an equal feeding value with corn when used as silage and the big thing is the greater tonnage per acre. The average of sunflower silage for dry land is 15 tons per acre and 40 tons per acre on irrigated land.

Stock raising has always been carried on here by using the free and open range the year around. The wild grass is to be found growing abundantly. This grass when full grown will stand upright and cure itself the same as cut grass. Horses, cattle and sheep thrive on this grass. They will keep fat and sleek the whole year, running out in the open, scraping off the snow with their feet in order to get a mouth full of grass unless a blizzard overtakes them. In order to keep animals as it does, it has to possess more food nutrients than our ordinary eastern hay.

The state has three principal Indian Reservations, but the farming done by

them is very little as their habits and modes of living are still very primitive in most all cases. The Indians are gradually dying out with tuberculosis as a result of their unsanitary living.

There are great opportunities out here for the young man and young woman, in other words this is the younger generations' country. There are to be found many of the country banks presided over by a president in his twenties. It is said that this country is made up of only the liveliest and wide awake people who had nerve and backbone to get out and hustle for themselves, emigrating from the other and older states, leaving the dead ones at home. The young person coming here without anything to start with, must be made of the right stuff and have the courage to withstand a few reverses and he is sure to succeed in the end.

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### STATE FAIR GROWING

Over 300,000 people attended each of the four great fairs held at Illinois, Iowa, Ohio and Wisconsin during the summer just passed. Plenty of good livestock was shown to make the competition good. Illinois led in cattle and hog entries, 1400 cattle and 4,000 hogs being entered. Ohio set a new mark with 2,000 sheep entries. Of the 1,139 cattle entries at the Ohio State fair, 679 or almost two-thirds were of the beef type. There were 389 entries in the dairy cattle class and 53 in the dual purpose class.

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### No Other Use for Them There.

Five Cincinnati fans were fined for throwing bottles at the umpire, but it is hard to see why. What else are bottles good for, nowadays?

## VOCATIONAL AGRICULTURE BOYS' AND GIRLS' CLUB WORK, ETC.

E. B. BARKER, Editor; J. A. MALICK, Assistant.

### DISTRICT CONFERENCES

District conferences of Vocational Teachers have been held during the months of October and November. The teachers of the state were divided into seven groups and two-day conferences were arranged for each group. The southeastern group met at Hamilton Township and Hilliards, the north-central group at Bloomville and Greenspring, the western group at Bluffton and Wapakoneta, and the southwestern group at West Milton and Brookville. Each conference was under the direction of two members of the Department of Agricultural Education, who presented the topics of special study which had been previously announced. In each conference opportunity was afforded for an observation of class room instruction during a portion of the day, and for a study of class room arrangement, a collection and display of illustrative and laboratory material. The remainder of the time was spent in exchanging ideas and discussing problems of general interest. The second day another school was visited so that an observation of two teachers could be made. With the small group of teachers assembled in this arrangement of conference work, it is felt that a most efficient method of teachers' improvement has been devised.

The sectional meeting of teachers of Vocational Agriculture which will be held in connection with the annual meeting of the State Teachers' Association will be held in Columbus during the

holidays. Out of state speakers secured for the program will be Professor L. M. Roehl, Cornell University, who will speak upon various phases of farm shop instruction, and Professor C. W. Watson, State Supervisor of Agricultural Education, of Lincoln, Nebraska, who will speak on project work in relation to agricultural instruction.

Mr. L. C. Wright, Ohio State University, 1911, who has been operating his farm near New Vienna, has rented his farm and taken charge of the Vocational Agriculture in the New Vienna High Schools, beginning November 1.

### STATE CHAMPIONS

Miss Thelma Shaw, aged 15, of Marysville, R. F. D. 7, who has been a club member for three years, was awarded the State Championship in the Clothing Club because of the excellency of her work. Her record and story of her work were perfect, and the quality of her work scored 59.2 points out of a possible 60. Outside of her club work Thelma has made one dress, two aprons, one corset cover and one camisole, besides some darning and patching.

Miss Priscilla Mull, age 14, of Centerville, R. F. D. 1, won State Championship in the Food Club, due to the quality of her work and to the almost perfect record which she has kept. Miss Mull put up 154 glasses of jelly and preserves, 13 quarts of dried fruits and vegetables, 301 quarts of vegetables, 43 quarts of meat, and made 69 loaves

of bread besides all of the home canning. Miss Mull is a member of the F. U. N. Club of which Miss Helen Hartsook is local leader.

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### CLUB WEEK

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Once each year, Ohio Boys' and Girls' Club winners, who have achieved county and district honors in the various club projects in their respective counties, spend one week at Ohio State University, taking part in an achievement program for their benefit.

This year, 550 boys and girls from 70 different counties attended this program November 15-19, inclusive, which was set aside as Boys' and Girls' Club Week. Heretofore, the program has been held at Farmers' Week, but, on account of the growth of both programs, it was deemed advisable to provide a separate week.

In arranging for their entertainment, a varied program of instruction, demonstrations, lectures, recreations, visits and tours to points of interest and a time for club songs, yells and stunts was provided. Four periods were devoted to pig, beef calf and dairy calf instructions by C. W. Gay, J. S. Coffey and C. S. Plumb of the Animal Husbandry Department. The group also witnessed a pork carcass cutting demonstration by C. T. Conklin of the same department. At the same time, Poultry Club members were instructed by E. L. Dakan, the poultry specialist. Firman E. Bear, of the Soils Department, gave a demonstration on limestone and soil fertility. W. E. Hanger, of the Crops Department, gave an illustrated talk on corn and R. F. Taber, of the Rural Economic Department, talked on farm records and their importance.

While the pig, calf, poultry, corn, garden and potato club members were attending this part of the program, the food and clothing members attended a program of lectures and demonstrations in Home Economics work. Miss Wanda Pryzluska, of the Home Economics Department, talked on "Health," Miss Educe Callahan of the same department told the girls how to choose suitable underclothing and gave points on dress. Miss Elizabeth Shelow demonstrated the school lunch. Miss Eloise Davison told the girls about kitchen arrangement and management and Miss Alice Donnelly talked on "The Girl and Her Room."

Both groups were given some light physical exercises and taught group games by the Physical Education Department. At 11 o'clock each day all assembled for chapel period, when they heard such men as President W. O. Thompson of Ohio State University, State Superintendent Vernon Riegel, A. P. Sandles and others.

None the less important were the visits to points of interest around the campus, to the Archaeological Museum, Library, Gymnasium, Barns and Poultry Plant. The girls had an opportunity to visit the Lazarus Department Store and the boys went through the Columbus Packing Co. Plant. One afternoon was given over to an automobile trip for all, to points of interest in and around Columbus, through the courtesy of the Franklin County Farm Bureau and the business men of Columbus.

Each evening, one-half hour was devoted to group singing and club yells, after which Dean Alfred Vivian presented his illustrated trip around the world. On Wednesday evening this meeting was held in the Gymnasium in



conjunction with the Farmers' National Congress.

All boys and girls had real experiences during the week, one of which was the staying at a hotel. The boys were guests of the Columbus Hotel and the girls of the Hartman Hotel. Every precaution was taken for their welfare, as they were all met at the trains, were divided into groups of 25 each and chaperoned by an experienced person who was with them every minute during the week. Good eating facilities were provided, as they got breakfast at the hotels and the other two meals at two churches near the University.

This is a week that all club members look forward to, that all parents feel is an opportunity for development and everyone can foresee, in these winners, what a fine group of rural leaders is in the making.

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## STATE PRIZE WINNERS

### Dairy Calf

One of the best pieces of club work performed in the state was that of Helen Greenlee, an eighteen-year-old girl of Belmont County. Helen is a High School graduate and is greatly interested in farming and especially in Holstein Cattle. Helen's calf stood at the head of a class of seventeen at the county fair and her other work and interest in her project was very high class. Helen is quite a judge of dairy cattle, too. She was one of a team of three that represented the State of Ohio in the junior judging contest at the National Dairy Show. In this contest, in spite of the fact that she was one of two girls among 48 in the contest, she won eighth place in all 'round work, and was high individual in Jersey Cattle. Helen is planning to attend State University next year.

### Pig Production

"Ted" Kryder, of Henry County, has a Poland China sow that farrowed eight pigs in her first litter. "Ted" never failed to give his sow and litter the very best of attention and as a result all eight pigs were raised with no "runts." At weaning time the litter weighed 507 lbs. and at the time of the county fair, or the end of an eighty-day feeding period, the litter weighed 1748 lbs. The average daily gain of the pigs was 1.72 lbs. at a cost of \$131.22 or .105c per lb. With such attention as this he could hardly have kept from heading the list in the state. "Ted" is also very much interested in Jersey Cattle.

### Beef Calf

To Daile Medstor, of Washington County, goes the honor of being the best all 'round beef calf club member in the state. In spite of the fact that Daile's heifer dropped a calf just a few months after he received her, she made a gain of 435 lbs. in 304 days for a total cost of \$71.48 or .155c per lb. of gain. Besides doing this excellent piece of club work Daile and his widowed mother operated a 150-acre farm. Daile's heifer was exhibited at the State Fair and won first in the junior yearling class in the club show. The Hereford calf and Daile are great friends. At the club sale he would not part with her, but bought her back and expects to start a herd of Herefords.

### Pig Growing

George Jackson, of Knox County, started with a Poland China pig weighing 61.5 lbs. At the end of a 78-day feeding period George's pig weighed 221 lbs. The average daily gain was 2.04 lbs. at a cost of \$18.18 or .114c per pound. George had a very fine pig.

(Continued on page 189.)

# SHORT AG. DEPARTMENT

J. V. TEMPLE, Editor; D. F. MILLER, Assistant.

## CLASS HISTORY OF THREE-YEAR AGS. OF '21

This class probably has more history than any other class that has graduated in this course. There are several of us who started in '17 and after completing the first year were either called into the service or from other cause were not able to attend in '18 and '19. But this did not stop some of our classmates and also brought in some new fellows. So on our return in '19 found quite a few second year men we had never seen before and also some of our old classmates were seniors. It certainly was a wonderful feeling to get back to O. S. U., as you cannot realize what it is until you have been away for a year or more.

This year when we came back we were surprised to have another addition to our class. Quite a number of vocational students have joined us, having gone to summer school here while the rest of us were toiling in the harvest field.

The enrollment for all three classes has fallen short this year, having only 233 students enrolled, 60 of which are vocational students.

With all our difficulties and losses of many of our best friends we will have one of the largest classes to graduate in the three-year course, having a total of about 45 members.

## SHORT AG. LITERARY SOCIETY

We held our first meeting in that familiar old room 200 in Townshend Hall, Tuesday, Oct. 26, and with no little pride do we wish to state that we

had the largest attendance that the society has ever known and from this group we secured 85 members and we feel quite sure that this number will be raised to the 100 mark the next meeting of the society.

Following the program the crowd highly enjoyed several bushels of apples, not to mention the doughnuts. The election of the officers proceeded, Mr. G. A. Thomas being elected president; Mr. R. L. Leeper, vice-president; Mr. R. H. Reutter, secretary, and Mr. O. H. Mautz, treasurer.

We will hold a meeting each Tuesday evening during our course and all are invited to come to listen or help us discuss the problems of farm life.

## THE ELMONT BOARDING CLUB

The Elmont Club has taken over by the Short Ags. in October, 1919. It started with and maintained a membership of fifty-two.

This year our steward, Mr. G. A. Thomas, who was elected last year, had things all set and the club started off full blast with breakfast on Wednesday morning, following registration with its fifty-two and several on the waiting list. A business meeting was held the following Saturday evening and the following officers were elected: Mr. S. M. Daugherty, president; Mr. H. H. Sheater, vice-president; Mr. R. H. Reutter, secretary-treasurer; board of trustees, Mr. J. T. White, Mr. J. W. Rich, Mr. R. L. Leeper, Mr. O. H. Mautz and Mr. J. V. Temple; auditing committee, Mr. R. A. Champion and Mr. E. M. Weaver.

## CLUB WORK A PART OF THE BIG PLAN

By ALLEN L. BAKER.

*(Mr. Baker is assistant and club leader at Pennsylvania State College.)*

**T**HE growth of the Farm Bureau has been one of the most notable agricultural events of recent times. It has a value to individual farmers today that is inestimable and, as the Farmer's Chamber of Commerce, has far reaching activities that are vital to our agricultural life. Commercial, legislative, social and educational possibilities of the Farm Bureau are unlimited.

Of these activities, the most important are the educational. Given these, the others will follow. Our farm bureaus today are demonstrating under practical field conditions, improved methods of conducting the farm business. It has been proven that man acquires more than eighty per cent of his knowledge through his eyes. It follows, therefore, that one demonstration where results can be seen is worth at least four lectures on the same subject.

As a part of our great Farm Bureau program we have educational measures for the development of farm boys and girls. They are taught through the mediums of vision and experience, the latter having long been recognized as **THE BEST** teacher. In contrast to the adult Farm Bureau work the boys and girls are organized into clubs with the element of competition and prizes added to promote enthusiasm and active interest.

The organization of this work is conducted by the State Club Leader, acting through the County Agent or County Club Leader as the case may be. These County Leaders, in turn, are assisted by one or more local, or community leaders for each club. These

local leaders are the most important cogs in the whole works, for without them the personal contact of club members and organizing leaders is lost. The local leader must be actively interested in boys and girls as well, and above all, must have that indescribable something called "personality" which inspires confidence and enthusiasm on the part of club members.

Expert assistance for the subject matter of these clubs is furnished by the Extension Specialists, from the various departments—animal husbandry, dairy, crops, or whatever the case may be. In this way our farm young folks have available the services of these itinerant teachers in the same full measures as do their parents. College instructors are brought to their very doors, barn doors included.

In this section of the country the most popular clubs are those in beef calf raising, dairy calf, pig feeding (fattening for slaughter), pig breeding, poultry rearing, sheep, corn, potatoes, gardening, sewing, cooking and canning.

Better methods in all the lines mentioned can be and are taught in our vocational schools. The great difficulty lies in that too many of our farm young folks leave school at an early age and that there are many communities which do not have a vocational school.

The great value of this type of educational work lies in the fact that it reaches the boy or girl who has left school at an early age as well as those who are in school, it reaches boys and girls who live in communities which do not have a vocational school and in



many cases reaches the parent through the boy or girl. It carries expert instruction into the home and feed lot.

We teach through vision, as in the stock judging contests, through experience, as in the team demonstrations and the actual feeding of livestock or canning of vegetables. It has been found that excellent results can be obtained through the use of the keen, plastic minds of boys and girls in putting across many successful demonstrations. In this way boys and girls get education in its most valuable form, through experience; at the same time they are assisting in the great Farm Bureau task of demonstrating better farm practices and developing themselves. After all, it is not the instruction in subject matter that comes first, but the development of our boys and girls; this is what gives importance to this phase of the farm bureau program of rural development.

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### TREE PRESERVATION

WOOD preservation is primarily a conservation measure and an economy of far reaching importance. Although but a minor detail of structural engineering is comparable perhaps with the axiom, "take care of the pennies and the dollars will take care of themselves."

Popularization of the practice of wood preservation is most desirable, but it is to be achieved only by education. The desire for thrift and economy is an indication of intelligence based on a conception of values, and that must be taught. Ignorance is wasteful.

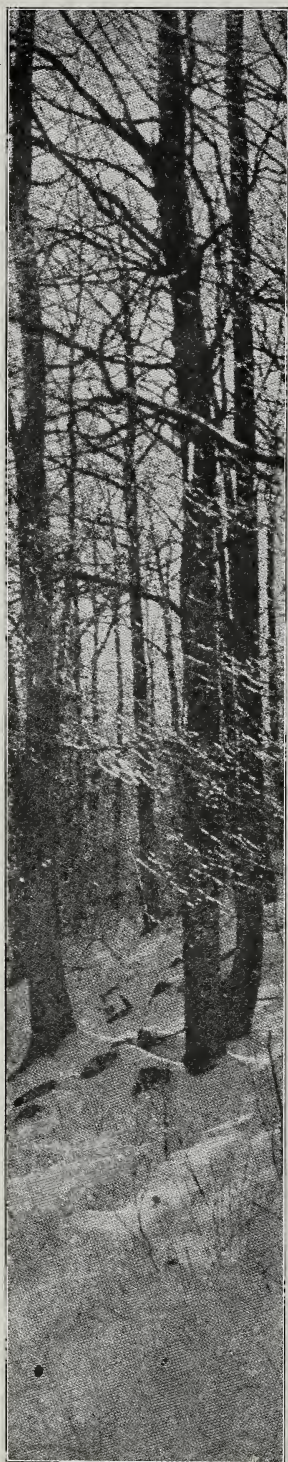
We are practically interested in developing efficiency on the American

farm, of promoting every effort which will in any way improve conditions, practices, or any phase of agricultural engineering; hence it is not only desirable, but, in fact, obligatory to aid in minimizing the loss due to the ravages of decay, and insects which annually destroy millions of dollars worth of lumber, and timber employed on farms. There are various ways in which this can be done. An extremely radical cure that has been advanced, is the entire elimination of wood, excepting for such luxurious purposes as interior trim, furniture, etc., but that is not apt to become a popular remedy, at least during the next fifty years or so. Wood will undoubtedly remain the most available building material for farm structures and uses.

It is a fact that the preservative treatment of wood is an unknown practice to the average farmer, and that those who have been reached by the educational efforts thus far expended were either discouraged by the apparent technicalities involved, or confined themselves to treating a few fence posts. This is largely due to the lack of confidence which the educators and experts have in the simple methods available, and their failure to recognize that the problem is chiefly one of experience, requiring adjustment of theory to the practical conditions encountered. In lieu of the factors involved in other industries, such as mining and general structural engineering, the customs and characteristics of the agricultural field must be given careful consideration to the end that the introduction of preservative treatments shall not create unreasonable obstacles.

The solution of this problem has occupied me for a long time, and it is my

(Continued on page 189.)



## The Feel in the Christmas Air

*They's a kind of feel in the air, to me  
When the Christmas-time sets in,  
That's about as much of a mystery  
As ever I've run ag'in.*

*For instance, now, whilse I gain in  
weight*

*And ginerall health, I swear*

*They's a goneness somers I can't quite  
state—*

*A kind o' feel in the air.*

*They's a fel as I say in the air that's  
jest*

*As blame-done sad as sweet!*

*In the same ra-sho as I feel the best*

*And am spryest on my feet.*

*They's allus a kind o' sort of a' ache*

*That I can't lo-cate nowhere;—*

*But it comes with Chrsitmas and no  
mistake!*

*A kind o' feel in the air.*

*They's a feel in the Christmas-air goes  
right*

*To the spot where a man lives at!—*

*It gives a fellow a appetite—*

*They ain't no doubt about that!*

*And yet they's somepin'—I don't know  
what—*

*That follers me, here and there,*

*And ha'nts and worries and spares me  
not*

*A kind o' feel in the air.*

*Is it the rackett the children raise?*

*W'y no!—God bless 'em!—no—*

*Is it the eyes and the cheeks ablaze*

*Like me own was, long ago?*

*Is it the bleat o' the whistle and beat*

*O' the little top drum and blare*

*O' the horn?—No! no!—it is jest the  
sweet,*

*The sad sweet feel in the air.*

*—James Whitcomb Riley.*



## A CHRISTMAS MEDITATION

By PROF. WM. L. GRAVES, Department of English, Ohio State University.

**C**HRISTMAS! What does the magic word mean to you? The memory of mornings before the dawn, when you explored the thrilling mystery of a deep, thrilling stocking? Long-forgotten images of diamond-dusted picture cards, or the sound of sleigh bells jingling along a snowy road? Does it suggest to you the joys of a huge Christmas dinner, or give you thoughts of family reunions, glad meetings with those long separated? Is it associated

peal has been made to us on their behalf, through the words of Herbert Hoover and the Literary Digest, burning appeal for the help that ought to come easily at this time of gift-giving. It dims the happiness of the season somewhat to look at the happy American youngsters, well-clothed, well-fed, and then to think of those thousands of undernourished, half-naked little children, Russians, Germans, Poles, Armenians, weakened by years of de-



The trees are hung with crystal lamps, the world lies still and white,  
And the myriad little twinkling stars are sharp with keener light.

in your mind with childhood stories of the little town of Bethlehem, of shepherds on a hillside, of the songs of angels above a manger-bed?

Well, somehow this year Christmas and its coming happiness brings to mind, maybe just by way of contrast, those thousands of little children, debris of the Great War, scattered half starved through all Europe, from the Baltic to the Red Sea. Ap-

privation, robbed by circumstance of every comfort, every necessity.

Winter is already upon them. Unless we help, they will go on suffering. A few dollars will clothe some shivering child, will secure for him milk, medicine, a coat and shoes. If Christmas means gladness for us, shall we not be all the more happy if we share our abundance with those whose need is so great and so immediate?



# HOME ECONOMICS

DAISIE CHLOE CUNNINGHAM, Editor; LILLIE SWANSON, Assistant.

## CHRISTMAS GIVING

The value of gold needs no explanation, frankincense is still a most important incense resin, and myrrh was highly prized as a cleansing agent. These were the most precious gifts those Wise Men could offer. Not only were gifts offered, but the Christmas spirit of giving accompanied the service.

Costly gifts do not always mean that they are best. We appreciate the gift which we know is the outward expres-

sion of care alone. It is no wonder that many of us heave a sigh of relief when Christmas is over, and with what mingled feelings do we review our mottled array of barter. Let us put a stop to this vicious endless chain, by giving to some child who loves to "dress up" that boudoir cap fashioned in the likeness of a trench cap, and by making some small boy happy with a present of that hideous crocheted necktie for driving lines. Thus may the spirit of Christmas be preserved in us after all,

"The Star drew night to the North-West,  
O'er Bethlehem it took its rest  
Right over the place where Jesus lay.  
Then entered in those Wise Men three  
Most reverently upon their knee,  
And offer'd there in his presence  
Both gold, and myrrh, and frankincense."

sion of loving thought and care. Pity the person who must exchange from fifty to seventy-five Christmas gifts. Is it possible to make each gift express loving thought and care. Before the seventy-fifth gift is selected, the thought has long since ceased to be loving and the greatest emphasis is laid

and may our friends, who might have received the insane gifts another year, still clasp our hands in friendship. Let our whole Christmas spirit be increasingly that of unselfish and intelligent service to our fellows, especially to those less fortunate than ourselves.

MRS. IVA C. CATRNS.

## STYLE SHOW

The Women's Student Council of the University, in an attempt to correct extremeness and general bad taste in dress on the campus, planned and executed a very attractive style show. Costumes appropriate for different oc-

casions were featured. Among these were charming dresses of serge, tricotine, and velour for morning, these materials made up with silks in a more elaborate fashion for afternoon and delicate and lovely shades for evening.

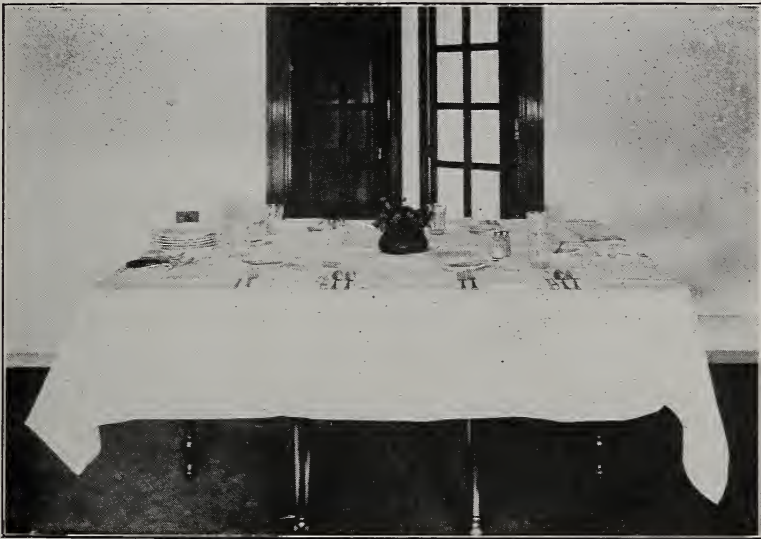
## THOUGHTS FOR THE CHRISTMAS DINNER

By CLARA S. HASKINS.

**C**HRISTMAS! What word in our language is more suggestive of happiness and merriment! The sparkle of the snow on the window, the green glittering Christmas tree, and the appetizing odors from the kitchen all add greatly to the enjoyment of Yuletide.

How many of us consider when quoting that time-worn poem, "'Twas the night before Christmas," just what that night must have meant to the fond

Knowing that her preserve shelves and vegetable cellar were well filled, grandmother drew upon them with generous hand to support her cause. No definite menu guided her choice, but only a whim or a memory of a peculiar preference of some idolized grandchild. With smiling tolerance she listened to the admonitions of her granddaughter who had made a scientific study of food and the various problems to be consid-



THE ARRANGEMENT OF THE TABLE

grandmother who was preparing the Christmas dinner? This dinner was one of her culinary festivals of the year. In it she attempted to combine the delicacies, perfected by years of experience, into a feast lacking in no detail, giving little attention to the hours and even days that she spent in its preparation.

No proverbial "groaning" of the table was heard, however it may have offered up many a silent prayer for pity to the god of sustenance.

ered in planning menus and in table service. Still unconvinced, grandmother continued her plans, ladening the table with quantities of food, the complexity of which would test the ability of any analytical dietitian.

What, can it be possible that after eating this wonderful dinner there could be unhappiness even in the slightest degree! Yes, there is usually an element of discomfort that detracts from the pleasure of the day.

But instead of looking backward,

let us consider what can be done to simplify the preparation and serving of our coming Christmas dinner and to insure the pleasurable satisfaction of those who partake of it. To begin with, due consideration must be given to the menu. Its selection is guided primarily by the function of the food which must be not only nutritious, but also appetizing and served in dishes suited to its kind and quantity.

One of the important things to remember in arranging the china and silver is the convenience and ease of the service of the meal. The keynote in arranging the table appointments is simplicity. Simplicity, however, in table service as in other matters is not easily obtained. As in dress it is indicative of good taste and refinement.

But are the pleasures of the table complete when it has been properly laid and adequate food has been supplied? Psychologists tell us that there are still other factors to be considered, such as the psychological effect of a clean, attractive dining room and the psychological influence of good lighting and ventilation. It has been pointed out, too, that "the food problem begins as the relatively simple problem of feeding and presently assumes the composite complexion of dining; and the diner, with no exemptions from the primitive satisfactions of universal needs, is none the less a social, aesthetic, moral, and intellectual being capable and desirous of a generous round of as worthy gratification as his endowments, tastes and circumstances may afford. He wishes to participate in the enjoyments of good and likewise sound living."

Let us prove that we are wide awake and vitally interested in the progress of our generation and in the improvement of home life by putting into prac-

tice the new ideas and ideals, and make Christmas the happiest, most joyous day of all the year.

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### COOPERATIVE SHIPPING OF LIVE STOCK

Cooperative livestock shipping is merely a group of farmers acting together under a certain arrangement to market their own livestock. In the past it has been the policy for the government to urge the farmer toward increased production. Now the farmers are taking upon themselves an effective study of the marketing of their produce. Very many organizations have been formed, probably the most numerous being the livestock shipping organizations.

The first recorded livestock shipping organization was formed by the farmers at Litchfield, Minnesota, in 1908. The farmers in Ohio, after seeing the success of the western farmers, are more extensively furthering the cooperative livestock shipping movement, for cooperative livestock marketing is no longer an experiment. The organization profits by eliminating the five or six middlemen and having one man, the manager, do the buying and selling for the organization. The fact that the average Ohio farmer does not sell his livestock in car load lots makes such an organization very effective. The manager can put the small lots together and fit out a car load or even grade the stock, another benefit which farmers could not possibly have without some sort of shipping organization.

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### There's Always a Compensation

Well, anyway, no country will ever again want to get into war with the United States. It takes too long to get out.



**VOCATIONAL AGRICULTURE**

(Continued from page 180.)

It was grand champion at the Knox County Fair, was at the head of his class at the State Fair and also reserve champion of the fair in the club class.

**Poultry Production**

Olen Bigbee, of Fulton, won the honors in poultry club work. Olen is 17 years old and is interested in White Leghorns. He raised 176 chickens out of 182 hatched.

**CAUSE FOR MOURNING**

Due to the crowded condition in the University some changes of schedule were necessary in the Short Course work. English has been one of the branches to suffer and much mourning (?) is being caused by the announcement that we will be given no English this year. Cheer up, there are better days ahead! Wonder if English classes might not be held in our new Stadium?

**IT TOOK A LAWYER**

Mr. Hardfax—So your son left us to go into a bank in the city? How did he acquit himself?

Mr. Timbertop—He didn't acquit himself. It took the best lawyer in the county to get him acquitted.—*Boston Globe*.

"What are you doing in the kitchen, Thomas?" inquired the inquisitive wife.

"I'm opening a can of tomatoes, if you particularly wish to know," he impatiently rejoined.

"And what are you opening it with?"

"Why with a can opener. Did you think I was using my teeth?" he added, savagely.

"Oh, no, dear," she said sweetly; "but I do know you are not opening it with prayer."—*Our Dumb Animals*.

**TREE PRESERVATION**

(Continued from page 183.)

belief that it lies largely with the agricultural colleges, and the various associated educational bureaus, to teach the value of wood preservation, not only to the students but also to those now engaged in the practice of agriculture. County agents' organizations promote better farming and so forth; they could likewise preach economical building, and aid considerably in the practical application of suitable methods of preservative treatment. The departments of the colleges having in charge the preparation of plans for numerous types of farm structures could advance the practice of this economy by merely indicating the parts and portions which are subject to decay and specifying their treatment with a preservative. Most plans and specifications covering metal, or steel structures and parts, clearly state requirements as to painting or that they shall be galvanized, and the necessity of protection against deterioration is thus emphasized. What I suggest is merely that the same precaution should be exercised in the case of wooden construction. Painting or galvanizing a steel fence post is necessary to protect it from rust, creosoting a wooden post is protection against rot; both are vital details of proper utilization.

Primarily the introduction of preservative treatment on the American farm is dependent upon the promotion of surface treatments, that is, the application of the preservative with a paint brush, in the same manner as paint, or application of one or more coats with spraying machines, or dipping of the lumber and timbers into creosote for shorter periods, and without heating during favorable weather.

The only opposition is that of those

who believe that these surface treatments are of little or no value, who state that unless a thorough impregnation of the wood with the preservative is obtained the effort is wasted. I wish to state emphatically that such a contention is erroneous. Surface treatments are of value, and do increase the life of timber so treated more than sufficient to warrant the expense and trouble. Admittedly, surface treatments are not as efficient as impregnation processes, and most assuredly where it is possible to employ the latter that should be done but nevertheless, and in spite of the popular impression that mere painting of the preservative on to the wood is a doubtful makeshift, I seriously recommend to you gentlemen that you devote your entire effort to introducing surface treatments on the farm. After that has been accomplished and when the farmer is thoroughly acquainted with the purposes and simpler practices of wood preservation, we can unitedly endeavor to improve the methods, and eventually, perhaps, induce the consumer to purchase properly creosoted wood from stock, but these are developments which must await the opportunity, and that can only be supplied by the gradual education which must proceed, as previously stated, along the lines of least resistance.

In the final analysis the entire problem devolves itself into educating the farmer to understand the cause and effect of decay, and to realize the loss to himself in dollars and cents of permitting the development of decay, and likewise the saving in dollars and cents resulting from the elimination of this loss by the practice of wood preservation.

A. F. J.

W. Lossen Hardesty, McConnellsville, Ohio, completed the Three-Year Short Course in '17, and since that time has, with his brother, been busy on their 350-acre farm in Morgan County. They produce some half-breed lambs for the market as well as fine wool sheep and beef cattle of the first grade.

Wm. S. Barden, '99, is employed as county agent of Morgan County and is doing good work in that capacity. He has organized a Shorthorn Breeders' Association and Wool Growers' Association. The Calf Club of the county produced the second prize calf club boy in Ohio. Mrs. Barden assists the country women in the organization of their clubs as well as helping with the Girls' Club work. More county agents of this sort are needed in Ohio.

Josephine Burnette, '19, has accepted the appointment as home demonstrator of Darke County, with headquarters at Painesville, Ohio.

Esther Ehrider and Ruth Bartlett, both of '20, are teaching in the High School at Piqua, Ohio. Miss Shrider has charge of Physical Education and Assists Miss Bartlett in Home Economics.

Warren T. McVey, '20, who was a member of the Fat Stock Judging Team when in school, is now instructor in Animal Husbandry at Purdue Agricultural College.

Naomi Conway, '20, is teaching in the Columbus Public Schools.

Estella Gerbardt's address is Bowling Green, Ohio. She is employed as teacher of Physical Education in the High School there.

R. B. Stoltz, '12, of the Department of Dairying, was superintendent of the Dairy Products Division of the National Dairy Show.

## SULPHATE OF AMMONIA

### *Its production in the United States*

Nearly a century ago Dr. George Fownes in a prize essay ("Food for Crops"), published in the Journal of the Royal Agricultural Society, wrote as follows:

"I would once more call attention to the salts of ammonia. Should these really be found to produce the beneficial effects anticipated, we shall possess at home, within the limits of our own island, resources for the improvement of agriculture compared with which guano and nitrate of soda, and all such things, are quite insignificant; resources which only require to be judiciously used to produce the most extraordinary results."

#### *The World's Capacity and U. S. Production*

During the last half century **Sulphate of Ammonia** has been used in ever increasing amounts to supply nitrogen to agriculture. Because of its merits as plant food, as an ingredient in mixed fertilizers, and also because of its relation to other industrial processes, it has become one of the greatest nitrogen carriers of the world. During the period from 1915 to 1919 the world's capacity for **Sulphate of Ammonia** has increased from 1,100,000 tons to over 2,000,000 tons at least and possibly more, if German figures are accepted. The increase in the United States alone has been from 190,000 tons in 1915 to 423,000 tons in 1919, and possibly half a million in 1920.

#### *The Source of Supply*

The domestic supply of **Sulphate of Ammonia** comes from bituminous coal, treated in the by-product coke oven or the coal gas retort, the former yielding ninety per cent of the total. As only half the coke now used in steel making comes from by-product ovens, and as the steel business is

increasing, it is not improbable that the next five years will see a capacity of a million tons of **Sulphate of Ammonia** in the United States alone.

#### *A Possible Saving of \$800,000,00*

Nor is this the limit of the possible recovery from our coal. Recent government reports state that in 1918 the country consumed 485,000,000 tons of coking coal, of which only one-sixth is actually being coked. If the remaining five-sixths were so treated, the coke would become available as the much desired smokeless fuel to replace and supplement our waning anthracite supply, for all industrial and domestic purposes. We would also save by-products valued at \$800,000,000, including 5,000,000 tons of **Sulphate of Ammonia** now annually wasted.

This does not take into account the additional supply of **Sulphate of Ammonia** from the various processes of fixing atmospheric nitrogen, which loom large on the immediate horizon. It may be noted, however, that wherever there is a choice as to the nitrogen compound produced, **Sulphate of Ammonia** is the one preferred for agricultural use.

Such an outlook certainly justifies renewed efforts on the part of our Experiment Stations and our agricultural leaders in determining and recommending the most efficient methods of using **Sulphate of Ammonia**, a field in which, compared with other carriers of nitrogen, but little has been done. Our knowledge of its effects in agronomy, in oliculture and in horticulture is as yet sadly lacking in scientific basis and in technical detail. Greater knowledge can only come from careful research and accurate experimentation.

Medina, Ohio  
Berkeley, Cal.

The *Barnett* Company  
Agricultural Department, New York

Baltimore, Md.  
Atlanta, Ga.



# THE CAMPUS ECHO

H. W. HAIRSHFIELD, Editor; MERRILL CONN, HOWARD JOHNSON, A. W. WOODROW,  
Assistants.

## COUNTY AGENTS' CONFERENCE

The annual conference of the county agricultural agents of Ohio was held at the University, November 3, 4 and 5. The convention opened with a record attendance of over 100, 78 of the state's 88 counties being represented. All sessions were held on the third floor of Ohio Union, where speaking programs were presented daily.

The opening address was delivered by Dean Alfred Vivian, who outlined the history of the farm bureau from the first organization to the present well known state and national organizations. He finished by impressing on the county agents their responsibility for carrying the farm bureau organization safely over the present period of depression.

Other addresses were made by President William O. Thompson, Director H. C. Ramsower of the agricultural extension service, and several prominent agriculturists from other states. Reports were made by the county agents and general discussions held.

## FARMERS' WEEK

The department of agricultural extension is making preparations for the annual Farmers' Week which will be held January 31 to February 5, inclusive. They expect last year's attendance record of 6,563 to be broken and are preparing to make this year's lecture course the most beneficial and widely attended ever given. Agricultural experts in various parts of the

country have been asked to accept invitations to lecture here during Farmers' Week.

## AG. OPEN NIGHT

The annual entertainment put on by the Agricultural College was given in the gymnasium on the evening of October 29th. Owing to the conflicting of the big rally with the team on its way to Chicago, the program did not start as set at 7:30 but somewhat later, giving the crowd time to get back. The stunts put on by the different agricultural organizations went off in grand style. Following the stunts, the remainder of the evening was enjoyed in dancing, with intermission, during which refreshments, cider and doughnuts were served. The music was furnished by a university orchestra.

## SAY, YES—

Ikey—Are you de young man vot safed by boy's life from drowning?

Pat—Yes, but don't mention it; I just did my duty.

Ikey—Vell, verre's his cap?—*Chaparral*.

## SUFFICIENT REASON

Mistress—"Haven's you any references?"

Maid—"I have, but they're like my photographs—none of them do me justice."

"A boy is better unborn than untaught."—*Gascoigne*.

## As Broad As Agriculture

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Organized and spread out like a great army, the International Harvester service organization reaches all places where there is agriculture and stands guard over International farm machines and implements numbered by the million. Here in the United States, 92 large branch houses, directing and supplying over 15,000 local dealers, protect the owners of International Harvester-made farm equipment against aggravating, profit-reducing delays. Repairs and expert service are always near at hand and quickly obtainable.

And because of this good after-sale service, plus service-proved quality and time-acquired manufacturing experience, the names **McCormick, Deering, International, P & O, and Chattanooga** have come to be recognized as guarantees of the fullest possible measure of satisfactory, profitable performances as applied to the products they represent. These products, over fifty in number, are sold by International dealers everywhere—**farm machine headquarters in their respective communities.**

**INTERNATIONAL HARVESTER COMPANY**

**CHICAGO**

**OF AMERICA**  
(INCORPORATED)

**U S A**

## BIG FEEDING YEAR

The present indications are that this will be a big feeding year. The large corn crop will lead many feeders to buy more feeding stock. Even though the cattle feeders lost heavily last year, many will no doubt enter the game again if corn is cheap as is the present outlook. At any rate feeder stock will probably continue to sell at a good price this fall.

## OHIO STATE MEN ACTIVE

At the fertility school for fertilizer men held in Columbus and Wooster June 8-11, Ohio State men were active. An interesting report of the meeting was published in the "News Bulletin" of the Soil Improvement Committee of the National Fertilizer Association. Some of the matter is of especial interest because of the topics treated and the men concerned. A few extracts from the report follow:

Professor Bachtell, the first speaker, discussed the various elements of plant food and their relative importance in crop production. He said in part:

"In olden times it was thought that some way could be found to change one element into another, and a great many efforts were made to accomplish this transformation. Most of these efforts were directed toward changing the commoner metal into gold and many fanciful ways for doing this were described. . . . The opportunities for turning elements into gold are greater today than ever before. Particularly is this true of phosphorus. The skill of the chemist and fertilizer manufacturer, coupled with the art of fertilizing by the farmer makes this possible. . . . The Ohio work shows that crops cannot make use of nitrogen and potash efficiently and profitably when phosphorus is a limiting factor. Only where phos-

phorus has been supplied are commercial nitrogen and potash profitable. Also, it can be said that phosphorus has been most profitable where nitrogen and potassium have been supplied in some manner. There is truly reason for the statement that phosphorus is the key to permanent agriculture."

In a series of carefully planned experiments Dean Vivian illustrated and explained the relation of diffusion, osmosis, and osmotic pressure to plant growth. These processes, in fact, make it possible for plants to obtain their food from the air, from water and from the soil.

The characteristics of soils and their effect on fertilizer use was very ably demonstrated by Professor Conrey. In a series of pot experiments where different types of soils were employed, he was able to show that the response to fertility treatment varies with the physical qualities of the soil. He also illustrated and discussed the effect of drainage, of limiting of organic matter and their relation to the use of plant food.

Professor Dustman, in discussing "Solubility and Availability," stated that "Availability has already been defined as the relative extent to which plants are able to secure and utilize a given form of plant food." Subsequent discussion brought out the fact that availability largely depended upon solubility, but that other variable factors are involved. Soil, season, and even the crop itself, influence the availability of any fertilizer material.

The last speaker on the program at Columbus was Dr. Firman E. Bear, head of the Department of Soils and Crops of Ohio State University, who spoke on "Adapting Fertilizers to Soils, Farms, Crops and Climate." In summing up Professor Bear said in part:



# A Great Sale of SPOTTED POLAND CHINA HOGS December 31, 1920

The most popular blood lines will be represented. The herd is headed by Mills' Choice by Buckeye Boy; and Galion King by Lilly Kirk.

The offering will consist of 50 head of Spring and Fall Gilts and tried Sows.

You are cordially invited to be present.

**JOSEPH MILLS**

South Market St., Galion, Ohio

**ALFALFA AND SPOTTED POLAND FARM**

THIS is a season of the year when it is a pleasure to exchange fraternal greetings which cement the cordial relationship and good feeling which exist between us.

We wish also to assure you that our best endeavors will be to maintain that quality and service which has given character to the Wyandotte products. And in extending to our friends sincere and hearty Holiday Greetings, we desire for you an abundance of the best things in life, and may the coming year bring health, increased wisdom and happiness.



**The J. B. FORD CO., Sole Mnfrs., Wyandotte, Mich.**

"It is apparent that soil deficiencies deserve first consideration no matter what the crop. For the middle west, a fertilizer containing a relatively high percentage of phosphorus is the first essential. The soil deficiencies are related in part to the system of management adopted by the farmer. Some soils have natural adaptations for certain crops, the basis of which are not readily determined. These adaptations have been discovered by the farmers and can now be shown as crop centers.

"Secondarily, the crop itself must be taken into consideration. Potatoes and clover respond to potash fertilization whole wheat is particularly benefited by phosphates and secondarily by nitrogen. Other crops have other special crop requirements which must be satisfied.

"The climatic factor modifies the fertilized practice. Nitrogen is most essential in cold seasons and in cold and hot climates. Phosphate and potash are especially necessary under the same conditions. Lime is particularly effective in northern latitudes.

"Practically it works out at present prices that a normal fertilizer ration can be said to be on approximating a 4-10-4 basis, with decreasing nitrogen or potash depending on the crop grown, its chemical composition, its season of growth and its foraging power for these elements in the soil. Supplemental fertility treatment such as manure may reduce the need for phosphates alone. The recommendations of the Soil Improvement Committee are perhaps as good as any which can be suggested in the present state of our information. Changes in selling prices of the several ingredients will make a variation in the formula desirable. More or less nitrogen or potash can be supplied to advantage depending on their relative

costs. The total quantity of fertilizer which can be applied with profit, once the proportions of the several ingredients have been determined, will depend, other things being equal, on the value of the crop."

## ALUMNI

Allen R. Cramer, '13, of Whartom, Ohio, is farming at home.

George Blair Crane, '13, is secretary of Agricultural Extension Department at Ohio State.

Thomas L. Guyton, '13, is a graduate student at Ohio State, studying for doctor's degree in Entomology.

Clayton L. Long, '13, manages a large general farm in Lake County.

Ralp F. Crim, '13, is County Agricultural Agent of Windom, Minn.

Carl Gearheart, '13, is in the grain and hay business at Wooster, Ohio.

E. R. Hoftyzer, '14, is connected with the advertising department of the Remington Arms Co.

W. W. Brownfield, '12, is Assistant State, County Agent leader at O. S. U.

Wallace Love, '13, has a farm at Lockwood, Ohio.

William E. McComas, '13, is County Agent at Fairmont, West Virginia.

Joseph Wm. Tulloss, '13, is a salesman for the Perfection Milker Co.

A. Williams, '13, is farming at his home in Ashtabula.

Herbert R. Wise, '13, is assistant state leader of Boys' and Girls' Club Work at Ohio State.

Harry Dean Drain, '13, is teaching in the Animal Husbandry Department at the University of South Carolina.

F. P. Stump, '97, is a partner in the livestock firm of Stump & Etzler. They breed registered Red Polled Cattle and Berkshire Swine. His address is Route 2, Convoy, Van Wert County, O.

J. Eckert, a Short Agr. student, is doing general farming in Morrow County.

Gilbert Gusler has recently been made editor of the business and market department of the "Ohio Farmer." He graduated from Ohio State University in 1913. He taught Animal Husbandry here for three years and for five years at the University of Illinois. He is a specialist in livestock markets, having spent a great deal of time in the detailed study of markets at Chicago, Omaha, Kansas City and East St. Louis.

C. R. Stoner, '14, is doing post-graduate work at O. S. U. He is specializing in Agricultural Chemistry.

M. A. Bachtell, '11, is county agent of Payne County. He was formerly associated with the Soils Department of the Ohio State University.

Henrietta Wahlenmaier, '20, is teaching at Groveport, Ohio.

E. Basl Hawes, '13, is connected with the Department of Public Instruction of the State of Ohio. He is located at the State House in Columbus.

Fritz Herzer, '15, is now the assistant professor of Dairying at the University of Mississippi.

O. M. Kile, '12, at one time editor of THE AGRICULTURAL STUDENT, is now editing the "National Agricultural Magazine." His offices are in the Mill's Building, Washington, D. C.

George Reed, '15, is county agent of Seneca County. He is doing real work as is shown by the fact that under

his direction the Wool Growers' Association of Seneca County is the only one in Ohio that has succeeded in disposing of this year's wool crop at a satisfactory price. In addition to this, the Seneca County Farm Bureau is the second in the State in size, and Seneca Boys' and Girls' Clubs have very good cause to be proud of their reputation.

L. H. Straub, Seneca County, who graduated from the Short Ag. course in '20, has recently been married and is planning on taking over his father's farm to operate it on a partnership basis. He will make the production of cream an important factor in the operations of this general farm.

D. S. Weaver, '20, is teaching Agricultural Engineering in the Mississippi Agricultural College.

Alumnus Balzer, '18, is now operating a farm on the Jackson Pike, south of Columbus.

Louise Sparling, '20, will be glad to see her friends at the Lazarus Lunch Room in Columbus.

Blanche Kelly, '20, is located at Burton, Ohio, where in addition to teaching Home Economics she has charge of the school lunch room at noon.

James Marple, '15, who specialized in Horticulture while in school here, is now located with the Storrs-Harrison Nursery Company of Painesville, Ohio.

Ross Jones, '16, is farming very successfully at Radnor, Delaware County, Ohio.

Graduate Montgomery, '18, is instructor in Smith-Hughes work at Martel, Ohio.

Arthur O. Bower, '22, and his father showed Brown Swiss Cattle at the National Dairy Show. They won Senior, Junior and Grand Champion-Female.



Charles F. Class, '13, is the agricultural agent of Warren County. His headquarters are at Lebanon.

Frederick G. Charles, '13, is instructor in the department of Horticulture at Ohio State.

Blair W. Adams, '13, is working on a fruit farm near Dublin, Ohio.

W. Scott Courtright, '13, is raising hogs in partnership with his father, in Montgomery County.

Mrs. Richard B. Morow (Mary Betz, '13) is now located in Richmond, Ind.

Anna K. Young, Columbus, junior Agriculture, has been elected president of Woman's Student Council for next year; Hortense Kruckman, Toledo, junior Agriculture, vice-president; Christine Yerges, Columbus, freshman Agriculture, secretary, and Mary Elberfeld, Columbus, sophomore Arts, treasurer.

C. B. Durham, '12, is president of the newly former C. B. Durham & Co., real estate firm, with offices at 760 Lemcke Annex, Indianapolis, Ind.

Charles H. Canfield, '07, is U. S. veterinary inspector at 822 Wall Street, Port Huron, Michigan.

J. B. Considine, '09, may be addressed at 1458 West 112 St., Cleveland, O.

Merle Harbarger Cox, '09, may be addressed at Eastover, South Carolina, R. F. D. No. 2.

"Chuck" Carran, '16, who captured Ohio State's first Western Conference tennis championship in 1915, is Director of Finance in East Cleveland. Carran last year won in the Cleveland City and State doubles championship meets. Address at City Hall, East Cleveland, Ohio.

Frank A. Welton, '16, is associate in Agronomy at the Ohio Agricultural Experiment Station at Wooster.

William Skelly, '18, is professor of Animal Husbandry at the University of New Jersey. He was a member of

the Ohio State Livestock Judging Team at the 1917 International Stock Show and was also captain of the Varsity Baseball Team.

Lewis S. Pence, '17, is in the Xenia, Ohio, plant of the Springfield Dairy Products Co.

Olga A. Elifritz, '17, formerly at the U. S. Bureau of Mines station in Columbus, now has headquarters at the Bureau of Mines Experiment Station, Bartlesville, Oklahoma.

Rei Duprey, '17, who is farming at Rural Route 8, Van Wert, Ohio, writes that "Ohio State is mighty strong here—we'll send at least six co-eds along with the regular quota of men to school this year."

G. K. Rule, '17, is county agricultural agent at Van Wert, Ohio.

P. L. Pugh, '16, is principal of the high school in Findlay, Ohio.

O. M. Kile, '12, at one time editor of *THE AGRICULTURAL STUDENT*, is now editing *The National Agricultural Magazine*. His offices are in the Mills Bldg., Washington, D. C.

Atilla C. Grant, '13, formerly with the Columbus Bill Posting Co., is now doing advertising work in New York City.

Fritz Herzer, '15, is now the Assistant Professor of Dairying at the University of Mississippi.

Paul M. Logan, '13, of Westwood, Cincinnati, is farming at home.

Harry W. Jones, '13, is the manager of the Beeman G. Dawes Farms of Licking County.

E. Basil Hawes, '13, is connected with the Department of Public Instruction for the State of Ohio. He is located at the State House in Columbus.

Wayne Patrick, '17, formerly on a farm at Mechanicsburg, Ohio, now is studying at Carnegie Tech, at Pittsburgh.

## Learn to Dance Before the Holidays Prof. W. J. Rader's Academies of Dancing

NEIL AVE. ACADEMY, 647 Neil Ave.

Phones: Citiz. 4431, Main 6189.

Take Neil Ave. car and get off at Poplar Ave.



**Beginners' Classes** organize Tuesday evening, December 7. Get the very first lesson.

**Afternoon Beginners' Class** Thursday, 2:30.

**Private lessons** afternoons or evenings.

**Assembly Nights** Monday, Thursday. Friday and Saturday, 8:15.

**Advance Class**, in the front hall, Monday evenings.

**Tuition** for beginners: Ladies, per term of 10 lessons, \$5.00; Gentlemen, \$6.00; Private Lessons, 5 lessons \$6.00..

Tuition can be paid \$1.00 a lesson until paid.

Private lessons can be had afternoons or evenings.

The Waltz, Two-Step, Fox Trot and One-Step taught in one term. Go to the school that gives you thorough instruction.

OAK ST. ACADEMY 827 Oak St.

Citz. 7105; Residence, Citiz. 4431; Main 6189.

A strictly private place for Sorority and Fraternity dances.

*Your Home*

## HENNICK'S TIFFIN SHOP

*Light Lunch  
Cigars  
Cigarettes*

The finest place of its kind in the country.

Pool Room :- Barber Shop

Learn to Dance—Class or Private Lessons

Dancing Every Evening

FOR GOOD THINGS TO EAT

## MARZETTI'S RESTAURANT

1548 N. High St.

59 East Gay St.

STEAKS, CHOPS, CHICKEN,  
ITALIAN DISHES, ETC.

Special Dinner and Lunches

ANYTHING SERVED  
ANYTIME

Table Service—Reasonable Prices  
Pleasant Surroundings  
Cool Room

WE SERVE ONLY THE BEST

Clell Solether, '13, was farming in Wood County, but he sold out and is now farming in Texas.

P. G. Campbell, '17, after graduating, became instructor of Agriculture at Woodward High School, Cincinnati, Ohio, and is now doing Smith-Hughes work at Laredo, Preble County.

A. A. Hammond, '16, of St. Clairsville, is assistant secretary of the Ohio Sheep and Wool Growers' Association. He is located at the Columbus Wool Warehouse.

F. E. Perry, '15, has recently been elected president of the Ohio Federation of Cooperative Livestock Shippers. Mr. Perry is farming at Leipsic, Ohio.

Trell Yocum, '15, is now the managing editor of "Farm and Fireside" and Andrew S. Wing, a graduate of the same year, is an associate editor on the same publication. They reside in New

York with Charles Hickernell, '16, who is connected with the National Bank of Commerce.

Herbert A. Andrew, '15, of Dalton, is the county agent of Augulaize County, Ohio.

William H. Lapp, '16, is head of the Poultry Extension Work at the University of Iowa.

C. F. Monroe, '20, of Toledo, has recently been employed at the Ohio State Experiment Station as assistant in Dairy Chemistry.

Clifford C. Hatfield, '04, has just returned from Siberia where he conducted some agriculture educational expeditions on the Volga River in European Russia. He is now living in Chicago and is engaged in recruiting more men for service in Russia.

M. M. Phillips, '16, of Medina, is county agent of Huron County. His headquarters are at Norwalk.

## *DRY OR STEAM CLEANING THAT SATISFIES*

PRESSING THAT IS CORRECT

**LEHMAN** 12th AVENUE &  
HIGH STREET

*We Remodel and Reline Garments*

Goods Insured While With Us

Delivery  
Service



# HEADS ALL HERDS

## In Iowa Cow Testing Associations

The Quaker Oats Company,  
Chicago, Ill.

McGregor, Iowa,  
Jan. 30, 1920

Gentlemen:—I am pleased to state that we have used SCHUMACHER FEED quite extensively in growing and developing our herd.

It is a great aid in promoting heavy production of milk and butter fat. We appreciate it much because of its perfect balance which makes it a safe feed to use in large quantities when feeding for heavy production.

We have fed SCHUMACHER FEED with excellent results to hogs and horses as well as to the Dairy Herd.

Yours very truly,

R. G. KINSLEY.

Note: { R. G. Kinsley's Herd has been making the best record in the McGregor Cow Testing Association, which for several months has been leading all Testing Associations in Iowa, having the best ten highest producing cows.

## The Schumacher Feeding Plan Will Help the Cows Increase Production

The Schumacher Feeding Plan consists of feeding SCHUMACHER FEED as the carbohydrate part of the ration and BIG "Q" DAIRY FEED as the protein part. These two feeds have proven with dairymen everywhere to be the ideal combination for best health conditions and maximum milk production. They simplify your ration problem—insure greater accuracy and uniformity, and require much less labor.

SCHUMACHER FEED is a finely ground, kiln dried, carbohydrate ration composed of various grain by-products that best supply the necessary maintenance for long time milk production. It affords that much needed variety of grains so essential and necessary to keep your cows in tip-top physical condition—to provide stamina and endurance to withstand the strain of long milking periods.

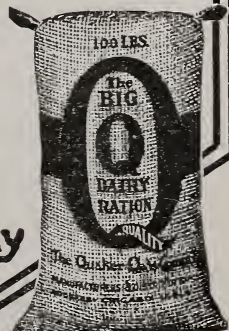
In addition to being the acknowledged **best** carbohydrate feed for dairy cows, it is also wonderful milk producer. With SCHUMACHER FEED as the maintenance part of the ration and BIG "Q" as the milk producing part, you have a ration that assures maximum production from **any** cow of **any** breed.

SCHUMACHER FEED in addition to being the acknowledged **best** carbohydrate feed for dairy cows, is also splendid for feeding all your farm stock. It puts "pep" and vigor into your horses—makes calves and hogs grow fast and produces big frames. It restores strength and vitality so dry cows assuring maximum milk production during the next lactation period.

Get a supply of SCHUMACHER and BIG "Q" from your dealer—let these feeds do for you what they are doing for thousands of other successful dairymen and farmers.

### The Quaker Oats Company

Address, CHICAGO, U. S. A.



L. N. Geiger, '18, has resigned from Smith-Hughes work at Edison to take up the same work at the Edward Lee McClain High School, Greenfield, Ohio.

O. H. Pollock, '12, is farming and breeding Percherons near Delaware, O.

E. Mead Wilcox, '98, is president of the Agricultural College in the Republic of Dominica, as well as being the director of the New Agricultural Station.

S. R. Guard, '12, is assistant editor of the "Breeders' Gazette." While in school he was editor of THE AGRICULTURAL STUDENT. His brother, I. L. Guard, '16, is farming at Elizabethtown, Ohio.

D. R. VanAtta, '10, former Hamilton County agricultural agent, resigned from a Cincinnati seed concern and is now in the industrial and farm tractor business.

Robert F. Griggs, '03, professor in the Department of Botany, has been elected the first honorary member of the Engineers' Club of Columbus, for his remarkable researches and discoveries in Alaska. Mr. Griggs was likewise made honorary member of the National Geographic Society. He discovered the "Valley of Ten Thousand Smokes" and has made several expeditions to Alaska since that time.

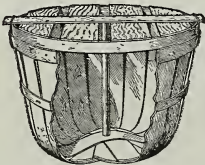
J. B. Markey, '16, who was a member of the Livestock Judging Team of 1915, is raising Shorthorns at Eaton, Ohio.

M. R. Wright, a Short Agr. student graduating in 1920, is assistant county Y. M. C. A. secretary at Ravenna, Portage County.

W. W. Smelker, '16, is connected with the Cleveland Tractor Company at Cleveland, Ohio.

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300% to strength of  
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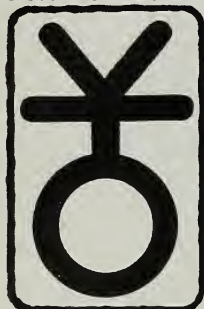
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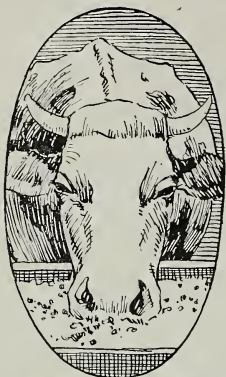
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It is a highly palatable and digestible molasses feed.

Feed International Special Dairy Feed in accordance with directions and you can increase the milk production of any cow in your herd from 60 to 100 gallons during a 6 months' period as compared to results from using any other feeds of similar analysis.

This result is guaranteed. Our check to cover guaranteed increase will be mailed you if you are not satisfied. Order your trial ton of Special Dairy *today* from your dealer. Write us if you need further information.

**INTERNATIONAL SUGAR FEED CO.**  
MINNEAPOLIS, MINN. Mills at Minneapolis and Memphis  
*Live Agents Wanted*

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**For Cheese-Making:** Hansen's Rennet Tablets, Junket Tablets (for Cottage Cheese), Cheese Color Tablets.

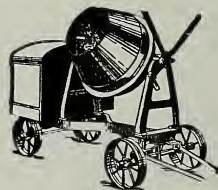
**For Butter-Making:** Hansen's Danish Butter Color (4 oz. and 1 oz. bottles), Hansen's Buttermilk Tablets or Lactic Ferment Culture for perfect ripening of cream for butter and milk for cheese and commercial buttermilk.

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*Placing the reinforcing steel of the door opening.*

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*Costs a Little More—  
Lasts a LOT Longer*

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Farmers who figure costs closely are using Natco Hollow Tile for silos, dairy barns, hog houses, dwellings, etc. Our book "Natco on the Farm" describes and pictures many such uses. Send for it today—no charge. Ask your building supply dealer to quote you on Natco Hollow Tile.

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*23 Factories assure a wide  
and economical distribution*



*Foundation and bottom courses of a Natco Silo. Note the still air spaces and the steel reinforcing bands.*

## Clear Your Land of Stumps

The farmer who has used large amounts of explosives for clearing his field of stumps has found that Hercules Low Freezing Dynamite, of low percentage, is saving him money and is doing better work than the other grades he has used.

He asks for

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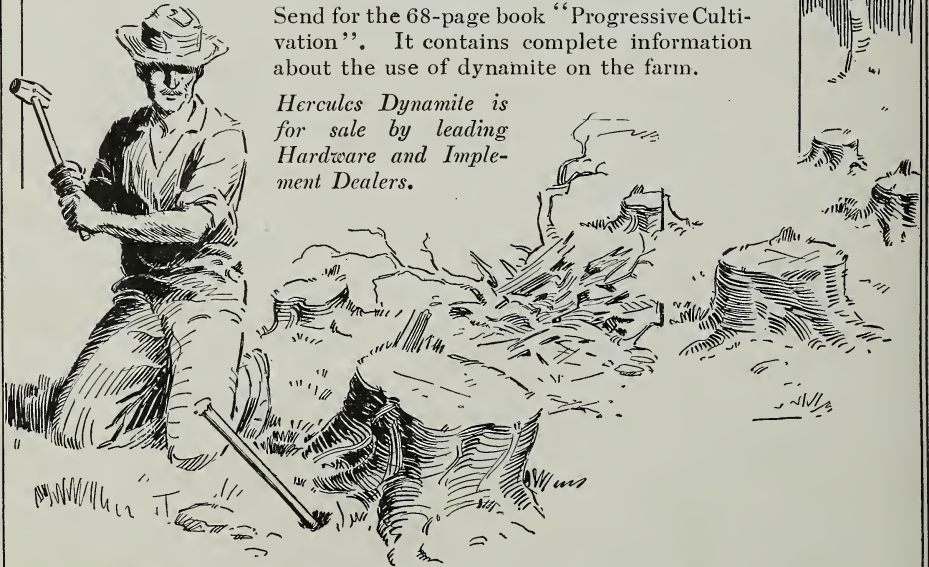
and he insists on getting it—because he knows that it makes good.

And when he needs accessories he buys Hercules Blasting Caps and Fuse because he knows that they are always reliable. He has found that a Hercules Combined Cap Crimper and Fuse Cutter not only insures safety when crimping but does quicker and better work for him.

Not only does the farmer experienced in blasting use Hercules Dynamite for stumping—but also for boulder blasting, ditching, tree planting, sub-soiling and other purposes which help to put his land in condition for cultivation

Send for the 68-page book "Progressive Cultivation". It contains complete information about the use of dynamite on the farm.

*Hercules Dynamite is for sale by leading Hardware and Implement Dealers.*



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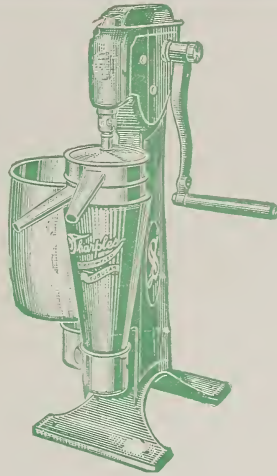
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